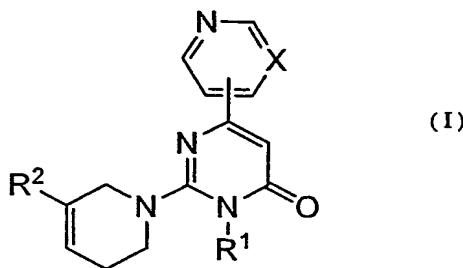


CLAIMS

1. A pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof:



wherein X represents CH or nitrogen atom;

R¹ represents a C₁-C₁₂ alkyl group which may be substituted;

R² represents a C₁-C₈ alkyl group which may be substituted, a benzene ring which may be substituted, a naphthalene ring which may be substituted, an indan ring which may be substituted, a tetrahydronaphthalene ring which may be substituted, or an optionally substituted heterocyclic ring having 1 to 4 hetero atoms selected from the group consisting of oxygen atom, sulfur atom, and nitrogen atom, and having 5 to 10 ring-constituting atoms in total.

2. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 1, wherein R¹ is methyl group.

3. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 1, wherein the heterocyclic ring at R² is a group selected from furan ring, benzofuran ring, thiophene ring, benzothiophene ring, benzisoxazole ring and 1H-indazole ring.

**4. A pyrimidone derivative which is selected from the group consisting of:
2-(5-phenyl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;
2-[5-(2-methoxyphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-**

pyrimidin-4-one;

2-[5-(4-methoxyphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-bromophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-fluorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(4-fluorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2,4-difluorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-chlorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(4-chlorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2,4-dichlorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2,6-dimethoxyphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-trifluoromethylphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(benzisoxazole-3-yl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-(5-benzyl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;
2-(5-biphenyl-2-yl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-(5-thiophen-3-yl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-(5-thiophen-2-yl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyridin-4-yl-3H-pyrimidin-

4-one;

2-[5-(4-fluorophenoxyethyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-[5-(4-pyrrolidinylcarbonylphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyridin-4-yl-3H-pyrimidin-4-one;

2-(5-phenyl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-methoxyphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(4-methoxyphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-bromophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-fluorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(4-fluorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2,4-difluorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-chlorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(4-chlorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2,4-dichlorophenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2,6-dimethoxyphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(2-trifluoromethylphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

2-[5-(benzisoxazole-3-yl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;
2-(5-benzyl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;
2-(5-biphenyl-2-yl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;
2-(5-thiophen-3-yl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;
2-(5-thiophen-2-yl-3,6-dihydro-2H-pyridin-1-yl)-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;
2-[5-(4-fluorophenoxy)methyl]-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;
2-[5-(4-pyrrolidinylcarbonylphenyl)-3,6-dihydro-2H-pyridin-1-yl]-3-methyl-6-pyrimidin-4-yl-3H-pyrimidin-4-one;

and or a salt thereof, or a solvate thereof or a hydrate thereof.

5. A medicament comprising as an active ingredient a substance selected from the group consisting of the pyrimidone derivative represented by formula (I) and a salt thereof, and a solvate thereof and a hydrate thereof according to claim 1.

6. A tau protein kinase 1 inhibitor selected from the group consisting of the pyrimidone derivative represented by formula (I) and a salt thereof, and a solvate thereof and a hydrate thereof according to claim 1.

7. The medicament according to claim 4 which is used for preventive and/or therapeutic treatment of a disease caused by tau protein kinase 1 hyperactivity.

8. The medicament according to claim 4 which is used for preventive and/or therapeutic treatment of a neurodegenerative disease.

9. The medicament according to claim 7, wherein the disease is selected from the group consisting of Alzheimer disease, cerebrovascular accidents (e.g. ischemic, age-related macular degeneration), Down syndrome, cerebral bleeding due to cerebral amyloid angiopathy, Parkinson's disease, subacute sclerosing panencephalitic

parkinsonism, postencephalitic parkinsonism, pugilistic encephalitis, Guam parkinsonism-dementia complex, Lewy body disease, tauopathies (e.g. Pick's disease, corticobasal degeneration, frontotemporal dementia, progressive supranuclear palsy), and other dementia including vascular dementia; acute and other traumatic injuries, brain and spinal cord trauma, peripheral neuropathies, retinopathies and glaucoma.

10. The medicament according to claim 4, wherein the disease is selected from the group consisting of non-insulin dependent diabetes (such as diabetes type II), obesity, manic depressive illness, schizophrenia, alopecia, cancers such as breast cancer, non-small cell lung carcinoma, thyroid cancer, T or B-cell leukemia, and a virus-induced tumor.